

Appl. No. 09/975,890
Amdt. Dated October 6, 2005
Reply to Office action of August 9, 2005

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Listing of Claims

Claim 1 (currently amended) A method for communicating a packet from a sending device coupled to a wireline subnet to a mobile station served by a base station connected to the wireline subnet in a wireless network, said base station having a wireline layer-2 MAC address, the method comprising

storing a shadow address of the mobile station in the base station, the shadow address being a wireline layer 2 address distinct from both said MAC address of the base station and the MAC address of the mobile station, uniquely identifying the mobile station, ~~and~~ having a format compatible with the link layer of the wireline subnet, and being assigned to the mobile station by the base station, and

transmitting the packet from the sending device over the wireline subnet to the base station using the shadow address as the link layer destination address of a link layer frame containing the packet.

Claim 2 (cancelled)

Claim 3 (currently amended) The method as recited in claim 2 1 wherein the transmitting includes communicating the shadow address from the base station to the sending device in response to an address resolution request by the sending device.

Claim 4 (currently amended) The method as recited in claim 1 further comprising, after the step of transmitting, sending the packet from the base station to the mobile station using a link layer frame compatible with ~~the~~ a link layer of the wireless network.

Claim 5 (currently amended) The method as recited in claim 1 wherein the mobile station has an IP layer address and the step of storing includes storing the IP layer address, the shadow address, and the a wireless link layer address as entries for the mobile station.

Claim 6 (currently amended) A method for communicating a packet from a sending device coupled to a wireline subnet to a mobile station served by a base station connected to the wireline subnet, said base station having a wireline link layer address, the method comprising

assigning by the base station a unique shadow address to the mobile station, the shadow address having the same format as the link layer address of the wireline subnet but being distinct therefrom,

storing the shadow address in the base station,

transmitting the shadow address from the base station to the sending device in response to an address resolution request by the sending device, and

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transmitting the packet from the sending device over the wireline subnet to the base station using the shadow address of the mobile station as the link layer destination address of the packet.

Claim 7 (original) The method as recited in claim 6 further comprising, after the second transmitting, sending the packet from the base station to the mobile station using a link layer frame compatible with the link layer of the wireless network.

Claim 8 (currently amended) The method as recited in claim 6 wherein the mobile station has an IP layer address and the step of storing in the base station includes storing the IP layer address, the shadow address, and the a wireless link layer address of the mobile station as entries in a watch list for the mobile station.

Claim 9 (original) The method as recited in claim, 8 wherein the address resolution request includes the IP layer address of the mobile station, and wherein the method further comprises, after the storing, looking up the shadow address in the watch list with reference to the IP layer address contained in the address resolution request.

Claims 10 -14 (canceled)

Claim 15 (currently amended) A method for communicating packets between a base station and a mobile station, said base station having a wireline link layer address and said mobile station having a wireless link layer address, said method comprising the steps of:

storing a shadow address of the mobile station in the base station, the shadow address being assigned by the base station and having the same format as the base station wireline link layer address but being distinct therefrom and distinct from the mobile station wireless link layer address, and serving as a unique identifier of the mobile station;

examining, at the base station, each packet received to determine if the shadow address of the packet matches one of the said stored shadow addresses address; and

communicating from the base station to the appropriate mobile station each examined packet for which there is a match of said shadow address of the packet and said stored shadow address .

Claims 16 - 17 (canceled)

Claim 18 (currently amended) The method of claim 15 wherein said ~~stored~~ shadow ~~addresses are generated by assigning, by the base station,~~ address is a unique wireline layer-2 address ~~to~~ for the mobile station assigned by the base station.

Claims 19-22 (canceled)